quency of the pulse, and stops the heart in diastole. 3. In regard to the respiration, opium allays dyspnœa, when present, by diminishing the bronchial secretion; in large doses it causes collapse. Belladonna calms down excited respiration, diminishes secretion, and in large doses renders respiration spasmodic and irregular. Aconite retards respiration by its direct action on the nerves. 4. In regard to their action in febrile states, opium augments the cutaneous secretions, and produces general malaise, erythema, and eruptions. Belladonna produces neither sweating nor general discomfort, raises the temperature, and sometimes causes sclarlatina-like eruptions. Aconite lowers the temperature. 5. In regard to their actions on the secretions, opium diminishes the quantity of urine, and in fact diminishes the secretions generally. Belladonna causes augmentation of the renal secretion, with diminution of the bronchial secretion. Aconite causes increase of the urinary secretion, but diminishes the bronchial secretion. 6. In regard to their action on the nervous system, opium acts chiefly on the cerebro-spinal system, belladonna on the cerebro-spinal system, and aconite on the spinal cord. Opium causes somnolence, sleep, intoxication, vertigo, muscular debility, diminution of common sensibility, contraction of the pupil, diminution of the activity and vigour of reflex actions. Belladonna causes sleeplessness, gay or furious delirium, hallucinations, muscular agitation, diminution of the sensibility of the face, dilated pupils, and remarkable diminution of the reflex acts. Aconite leaves the intellectual faculties intact, but causes muscular torpor, anæsthesia, hallucination of the senses, diminution of reflex actions, and produces slight dilatation of the pupil.—*Lancet*, July 20, 1878.

Butyl Chloral.

According to Prof. LIEBREICH (*Lancet*, July 20, 1878), in the human subject, as well as in the lower animals, the first action of the drug is to produce anæsthesia, which begins in the head and gradually passes to the rest of the body, reflex irritability remaining intact in the limbs for some time after it has been abolished in the head. Then follows narcosis; but it is important to observe that anæsthesia in the head and face may be complete before any trace of narcosis manifests itself. From a consideration of this fact Professor Liebreich suggests the use of butyl chloral in operations on the face, in cases where other anæsthetics are contra-indicated. The dose for this purpose is from one to two grammes (15 to 30 grains).

In some remarks on the action of butyl chloral on the heart and the manner of death in fatal cases, Prof. Liebreich points out, that, whereas in the case of chloral hydrate the heart was paralyzed and its action ceased before the movements of respiration came to an end, the reverse held good in the case of butyl chloral. A fatal dose of that substance attacks the respiratory centre in the medulla oblongata and paralyzes it, while the heart is unaffected and continues to pulsate for some time after death.

To demonstrate this fact Professor Liebreich showed two rabbits, both of which were in a state of complete narcosis, the one from the effects of chloral hydrate, the other from butyl chloral. In the case of the first animal the thorax was opened just as all respiratory movements ceased. The heart was lying motionless, both ventricles being dilated and filled with blood. Artificial respiration had no effect in reproducing the cardiac contractions. But, on the other hand, when the thoracic cavity of the rabbit poisoned with butyl chloral was opened (at exactly the same stage) the heart was found to be beating regularly, and to all appearance normally. After about two minutes the beats, which during that period had become slow, ceased. Artificial respiration at once restored the pulsations, and so long as the rhythmical inflation of the lungs was kept up, the contraction of the heart continued; thus affording an admirable illustration of the views as to the action of the drug which had been enunciated in the course of the lecture. Professor Liebreich also indicated that this property gave the drug considerable advantage as an anæsthetic for vivisectional purposes, especially in England.

Prof. Liebreich refers to the value of butyl chloral in cases of tic douloureux, and advises its administration, dissolved in glycerine and water, rather than in alcohol, in doses of from one to two grammes.

Misuse of Bromide of Potassium.

According to BOETTGER (*Allgemeine Zeitschrift für Psychiatrie*, Band xxxv., Heft 3), it is by no means uncommon for methods of treatment of the greatest importance, so soon as they become well known to the laity as well as to the profession, to be so misapplied as to cause unfavourable results, and thus to bring general discredit upon procedures which, when adopted with discrimination, are of the highest value. As instances of this may be cited, the administration of chloroform and of hypodermic injections, especially of morphia; also the use of chloral hydrate; from the abuse of all of which the most lamentable effects are frequently brought under our notice.

Among the class of nervine and hypnotic medicines, bromide of potassium has of late taken very high rank; administered timidly at first in small doses, it is now freely given in large quantities, its use as a hypnotic is constantly becoming more frequent, it has taken an important place in the materia medica of alienists, it has been recommended as a sovereign remedy for epilepsy, and the literature of the subject is already very considerable. All these circumstances render the drug peculiarly liable to abuse. For a long time it was regarded as incapable of doing harm, until Seguin showed that its indiscriminate use was greatly to be deprecated, and that the long-continued administration of preparations of bromine may, and often does, give rise to a well-defined disease (bromism), characterized by the following symptoms: feelings of weakness and lassitude, depression of the heart's action, coldness of the extremities, a peculiar heaviness of speech, a pustular or papular eruption of the skin (which may be confined to a few spots, or may be so abundant as to resemble that of variola), and, lastly, a peculiar, sweet, but unpleasant odour of the breath, which Dr. Boettger has invariably been able to distinguish in patients who have taken the drug continuously.

In still higher degrees of bromism, with which the present paper is more directly concerned, Seguin found that stupor supervened, memory and articulation seemed to be especially affected, hallucinations of all the senses were observed, tremor of the muscles came on with unsteady gait, all movements became uncertain, and the more delicate ones impossible, the pupils were unequal and reacted only slowly; in male patients sexual power, and in females menstruation, was disturbed. It is evident that a patient in this advanced stage of bromism might easily be taken to be suffering from paralytic dementia. Seguin admits that the diagnosis might present great difficulty, and Boettger has actually experienced it; the history of the case is the most important point from which to form an opinion. A fatal issue is, moreover, not uncommon in severe cases of bromism. The following case illustrates well the resemblance between advanced bromism and the last stage of general paralysis.

Herr C. R., aged 29, well-educated, had no hereditary predisposition to insanity, and had previously enjoyed good health. With the exception of some severe hardships which he suffered while serving in the Franco-German war, he had always led a steady and regular life. After not having felt quite himself for